

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Armadale Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **71% ABOVE AVERAGE**

The City of Armadale has been above average in implementing nutrient BMPs in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management, development control and nutrient education.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducted soil and moisture testing and leaf tissue analysis in active turf areas and irrigated parks. It is recommended that if foreshore areas are irrigated then moisture testing be conducted alongside the soil tests and leaf tissue analysis currently being undertaken. If dry grass areas are fertilised, nutrient testing should be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

Despite stating that foreshore areas are fertilised, no information was provided on the amount of fertiliser that was applied. A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be performed. It would be appreciated in future years if better records were supplied about the fertiliser applied to each location (active turf, passive turf and foreshore areas), including the area to which it was applied and the number of applications per year. This information will allow calculations to be made of the amount of nutrients applied each year. It is recommended that fertilisers not be applied during winter and summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	NO	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City have structural measures in place, such as infiltration, conveyance or detention systems, to reduce nutrients entering waterbodies. It is recommended that no further deciduous trees be planted on road verges or near water bodies. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	YES	

The City excels in regularly monitoring nutrient levels in wetlands, stormwater drains and compensating basins, however, does not currently report the results to the community. It is recommended that they continue their current monitoring practices but commence reporting of the results to the community.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	NO	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying. They should also have mechanisms in place to regulate sediment management.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCUL's website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Bayswater Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



100%  
BMPs

### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **100% EXCELLING**

The City of Bayswater should be commended for having all of the assessed nutrient Best Management Practices in place.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City performs leaf tissue analysis and soil and moisture testing of sports fields, golf courses, irrigated parks and foreshore areas. It is recommended that this testing regime continue. If dry grass areas are fertilised then nutrient testing should be performed.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. It is recommended that the City continue to implement their current practices in other turfed areas, with the exception that fertiliser not be applied during the winter months.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City continue to implement its current practices. It is recommended that no further deciduous trees be planted on road verges or near waterbodies.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	YES	

It is recommended that the City continue to implement their current practices, including the reporting of results to the community.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

## ADDITIONAL INFORMATION PROVIDED

Raingardens, living streams and micro wetlands continue to be constructed. School events are held to teach students about the connection of stormwater to the river and the role of nutrients. "Clean Drains River Gains" drainage kerb markers are installed around the City. The Waterwise Bayswater Strategy provides guidance on actions to create a more waterwise city. 30,000 plants were installed by community groups over weekend planting days. Residents continue to install native verges and street trees.

The following practices continue to be undertaken by Parks and Gardens: verti draining, shockwave aeration, retic upgrades, retic training programmes - efficiency etc, top dressing, hydrozoning, mulch, wetting agents, sand banding, testing of additional tennis clubs and turf cricket wickets with results passed to the clubs themselves in addition to wetting agents and growth retarder used in summer. Grass also mown slightly higher to protect the canopy and reduce the requirement for weed spraying, fertilisers, sweeping of grass tailings etc.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Belmont Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



## BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **81% EXCELLING**

The City of Belmont has excelled in implementing nutrient BMPs in 2020/21. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications, nutrient management and development control.

### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

## NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City performs leaf tissue analysis and soil and moisture testing of sports fields and irrigated parks and tests soil moisture in foreshore areas. It is recommended that soil testing and leaf tissue analysis also be undertaken in foreshore areas that are fertilised. If dry grass areas are fertilised then nutrient testing should be undertaken in these areas.

## FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be performed. Analysis of the fertiliser application results indicates that the City is applying fertiliser containing both nitrogen and phosphorus to foreshore areas without performing nutrient testing. The application rate of nitrogen from the Eco-Growth Pro Series NPK fertiliser applied to active turf is also above the recommended single application rate of 40kg/ha. It is recommended that the City ensure that each single application of nitrogen be below this amount. It is recommended that fertiliser not be applied during summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. It is recommended that a NIMP be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping be enacted.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	YES	

The City excels in regularly monitoring nutrient levels in wetlands, stormwater drains and compensating basins, however, does not currently report the results to the community. It is recommended that they continue their current monitoring practices but commence reporting of the results to the community.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Canning Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **75% ABOVE AVERAGE**

The City of Canning has been above average in implementing nutrient BMPs in 2020/21. Further improvements can be made in the areas of fertiliser applications to foreshore areas, nutrient management, water quality monitoring, development control and nutrient education.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City performs leaf tissue analysis and soil and moisture testing of sports fields, irrigated parks, dry grass areas and foreshore areas. It is recommended that this testing regime continue.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

Fertiliser applied to active and passive turf is completed according to LGA officers experience and interpretation of lab data and is in a liquid form applied to foliage which is recommended. No information was provided on the seasons in which fertiliser is applied to active turf. The City stated that fertiliser applied to foreshore areas does not contain phosphorus and is not a controlled release, low water soluble fertiliser, however, the information provided on the amounts applied indicates that an organic top dress that contains 1.1% phosphorus was applied so the responses were changed accordingly. A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be performed. The application rate of nitrogen from the organic topdress is also above the recommended single application rate of 40kg/ha. It is recommended that in those areas beyond the buffer zone nitrogen is applied at a single application rate of 40kg/ha or below.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. It is recommended that a NIMP be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	N/A	
Are compensating basins regularly monitored for nutrient levels?	NO	

The City has indicated that all of its stormwater is directed to "dry" sumps or soakwells (those that do not intersect the maximum groundwater table) which is why this question is marked N/A. However, in previous years the City has reported that it monitors stormwater drains and on its website it states that drains carry water to the river as well as sumps. If this is the case it is recommended that both stormwater drains and compensating basins be regularly monitored for nutrient levels.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCUL's website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

## ADDITIONAL INFORMATION PROVIDED

Canning has implemented the practice of foliar applications of straight nutrient blends derived from interpreting raw laboratory data. Blends are sprayed onto the turf with total Nitrogen levels below the threshold for burning (1g/m<sup>2</sup>), therefore no follow up irrigation is applied. Fine weather conditions are required for the days of application allowing the nutrients to dry on the turf leaves preventing any run off into drains, creeks, rivers etc.



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 Town of Claremont Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **65% ABOVE AVERAGE**

The Town of Claremont has been above average in implementing nutrient BMPs in 2020/21. Further improvements can be made in the areas of nutrient management, water quality monitoring and nutrient education.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The nutrient monitoring that the Town does is to a high standard. It completed soil tests in irrigated parks and foreshore areas and leaf tissue analysis in irrigated parks. It did not apply any fertiliser in 2020/21. If fertiliser is applied in future years it is recommended that the Town conduct soil tests and leaf tissue analysis in all areas that are fertilised and moisture testing in irrigated areas.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The Town reported that it did not apply fertiliser to any parks in 2020/21.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	NO	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that the Town use BMP measures to prevent nutrients from grass clippings entering waterbodies via stormwater drains (refer to main report for measures that can be implemented). It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping be enacted.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	BELOW AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

The Town regularly monitors wetlands for nutrient levels and reports the results to their local community. It is recommended that they also monitor, and report on the results from, stormwater drains and compensating basins. SERCULs Water Quality Monitoring team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	YES
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	BELOW AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	NO	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the Town implement BMP measures to educate the public about not feeding bread to waterbirds and provide ratepayers with advice on best practice in fertiliser management according to soil type (refer to main report for measures that can be implemented). SERCUL has a flyer that can form the basis of a sign educating the public about not feeding waterbirds. SERCUL also has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The Town can also link its website to the Fertilise Wise page of SERCULs website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Cockburn Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turf areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **86% EXCELLING**

The City of Cockburn has excelled in implementing nutrient BMPs in 2020/21. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications and nutrient management.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts regular leaf tissue analysis and moisture testing of its sports fields and irrigated parks. It also conducts soil tests of new parks, on request. It conducts no soil tests, leaf tissue analysis or moisture testing of foreshore areas or dry grass areas. It is recommended that the City conduct soil and leaf tissue analysis of all fertilised areas and moisture testing of irrigated areas.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

Despite stating that foreshore areas are fertilised, no information was provided on the amount of fertiliser that was applied. A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be performed. In future years information should be provided on the amount of fertiliser that was applied to foreshore areas.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	NO	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City use BMP measures to prevent nutrients from grass clippings entering waterbodies via stormwater drains (refer to main report for measures that can be implemented). It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	N/A	

It is recommended that the City continue to monitor nutrient levels in their wetlands and stormwater drains. The results of wetland monitoring are reported to the community and it is recommended that the City also report the results of stormwater drain monitoring. The City has no compensation basins within its borders or under its control.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 Town of Cottesloe Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **52% AVERAGE**

The Town of Cottesloe has been average in implementing Best Management Practices in 2020/21. The Town has no freshwater waterbodies within its borders and only has a small area within the Swan Canning Catchment. Therefore, it is unlikely to contribute greatly to the nutrient load of the Swan Canning River System. The Town should, however, be mindful of the nutrients entering the ocean via the groundwater. Improvements are required in all areas of nutrient practices.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	NO	UNSATISFACTORY
Is analysis conducted by a lab affiliated with ASPAC?	N/A	
Is plant available phosphorus in the soil measured using an appropriate test?	N/A	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	N/A	

It is recommended that the Town conduct regular soil tests and leaf tissue analysis in all fertilised areas at least biannually to determine accurate nutrient levels. In irrigated areas they should also conduct soil moisture tests. It is recommended employees involved in turf management attend SERCULs Fertilise Wise Fertiliser Training in 2022.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

The Town reported having no foreshore reserves in the survey, however provided details on the amounts of fertiliser added to these areas. Consequently their answers were changed to reflect the information provided. The foreshore area is adjacent to the ocean rather than the river. A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. The same fertiliser was used on active, passive and foreshore areas at the same rates of application. Nitrogen is being applied at rates above the recommended single application rate of 40kg/ha. It is recommended that the fertiliser type and rates be determined by the requirements and conditions of the specific site, based on nutrient testing and the single application rate of nitrogen be no more than 40kg/ha.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

The Town reported having no structural measures in place in the survey, but later confirmed that they have "dry" sumps or soakwells, which is an infiltration system so their answer was changed to reflect this information. It is recommended that no further deciduous trees be planted on road verges or near water bodies. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	N/A	
Are stormwater drains regularly monitored for nutrient levels?	N/A	
Are compensating basins regularly monitored for nutrient levels?	N/A	

The Town has no wetlands or compensation basins within its borders or under its control and its stormwater is directed to "dry" sumps or soakwells (those that do not intersect the maximum groundwater table). It reported that it does monthly sea water testing that is sent to the laboratory for analysis.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	NO	

It is recommended that the Town imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying. They should also have mechanisms in place to regulate sediment management (refer to main report for measures that can be implemented).

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	BELOW AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	NO	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the Town implement BMP measures to educate the public about not feeding bread to waterbirds and that they provide ratepayers with advice on best practice in fertiliser management according to soil type (refer to main report for measures that can be implemented). Although the Town does not have freshwater waterbodies within their borders, birds are highly mobile animals and can deposit nutrients in waterbodies elsewhere. SERCUL has a flyer that can form the basis of a sign educating the public about not feeding waterbirds. SERCUL also has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The Town can also link its website to the Fertilise Wise page of SERCUL's website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 Town of East Fremantle Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **79% ABOVE AVERAGE**

The Town of East Fremantle has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of water quality monitoring, development control and nutrient education.

#### RESPONSE KEY:

BMP has been achieved 
  BMP has NOT been achieved 
  Not Applicable 
  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling 
  Above Average 
  Average 
  Below Average 
  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

Soil testing and leaf tissue analysis were conducted in sports fields, which were the only areas fertilised. It is recommended that if these areas are irrigated then moisture testing also be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The Town does not apply fertiliser to foreshore areas and it is recommended that this practice continue. It is recommended that the Town continue to implement their current practices in other turfed areas, with the exception that fertiliser not be applied during the summer months.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the Town continue to implement its current practices. It is recommended that no further deciduous trees be planted on road verges or near waterbodies.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	N/A	UNSATISFACTORY
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

The Town does not have any wetlands within its borders or under its control. It is recommended that the Town monitor stormwater drains and compensating basins for nutrient levels and report the results to their local community. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the Town imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the Town provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The Town can also link its website to the Fertilise Wise page of SERCULs website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Fremantle Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **89% EXCELLING**

The City of Fremantle has excelled in implementing Best Management Practices in 2020/21. The City only has a small area within the Swan Canning Catchment. Further improvements can be made in the areas of water quality monitoring and development control.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts leaf tissue analysis and soil and moisture testing in sports fields, golf courses and irrigated parks. No information was provided on the testing conducted in foreshore reserves, however they do not fertilise these areas. It is recommended that if dry grass areas are fertilised then nutrient testing should be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. No information was provided on the amounts of fertiliser applied to other areas so we cannot make any comments on their practices in these areas. We would request that this information be provided in the future.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City continue to implement its current practices. It is recommended that no further deciduous trees be planted on road verges or near waterbodies.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	N/A	

There are no compensating basins within the City's borders or under its control. The City regularly monitors wetlands for nutrient levels and reports the results to their local community. It is recommended that they also monitor and report on the results from stormwater drains. SERCUL's Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Gosnells Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **80% ABOVE AVERAGE**

The City of Gosnells has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient management, water quality monitoring, development control and nutrient education.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts leaf tissue analysis and soil and moisture testing in sports fields and irrigated parks. They do not test in foreshore reserves, however they do not fertilise these areas. Soil testing is undertaken in dry grass areas. If these areas are fertilised then leaf tissue analysis should also be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. It is recommended that the City continue to implement their current practices in other turfed areas, with the exception that fertiliser not be applied during the summer months.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that a policy to use local native plants as the first choice in landscaping be enacted and that no further deciduous trees be planted on road verges or near waterbodies.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	ABOVE AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	YES	

It is recommended that the monitoring of wetlands and compensating basins continue. Stormwater drains should be monitored and that results of all monitoring be reported to the local community. SERCUL's Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCUL's website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Kalamunda Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **50% AVERAGE**

The City of Kalamunda has been average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications, nutrient management, water quality monitoring and development control.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	NO	UNSATISFACTORY
Is analysis conducted by a lab affiliated with ASPAC?	N/A	
Is plant available phosphorus in the soil measured using an appropriate test?	N/A	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	N/A	

It is recommended that the City conduct regular soil tests and leaf tissue analysis in all fertilised areas at least biannually to determine accurate nutrient levels. In irrigated areas they should also conduct soil moisture tests. It is recommended employees involved in turf management attend SERCULs Fertilise Wise Fertiliser Training in 2022.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	NO	
Is fertiliser added to foreshore reserves and parks?	N/A	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City reports that it does not have any foreshore reserves or parks. The only areas in the City that are fertilised are active turf areas. These areas are fertilised once every season using a complete fertiliser. The rate of nitrogen applied is greater than the maximum recommended single application rate of 40kg/ha. It is recommended that the City only fertilise in autumn and spring according to the results of soil tests, leaf tissue analysis and moisture testing and that no single application of nitrogen exceed 40kg/ha.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	NO	AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	NO	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City have structural measures in place, such as infiltration, conveyance or detention systems, to reduce nutrients entering the river system. It is recommended that they implement non-structural measures to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains and that no further deciduous trees be planted on road verges or near water bodies. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	NO	BELOW AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	NO	

The City regularly monitors stormwater drains for nutrient levels but does not report the results of monitoring to the local community. It is recommended that the City regularly monitor nutrient levels in wetlands, stormwater drains and compensating basins and reports the results of monitoring to the local community. SERCUL's Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO RE-SPONSE	
Do you have mechanisms in place to regulate sediment management?	NO	

The City provided no response to the question regarding NIMPs. If they do not have conditions on development which include a NIMP it is recommended that they impose them, monitor them for compliance and prosecute developers that are not complying. They should also have mechanisms in place to regulate sediment management (refer to main report for measures that can be implemented). The answer that was provided to this question was not a way to regulate sediment management so the response was changed from unsure to no.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Kwinana Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



## BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **65% ABOVE AVERAGE**

The City of Kwinana has been above average in implementing Best Management Practices in 2020/21. The City does not have any area within the Swan Canning Catchment and therefore does not contribute nutrients to the Swan Canning River System. It does however have important wetlands and ocean within or adjacent to its boundaries and should be mindful of the nutrients entering these waterbodies. Further improvements can be made in the areas of nutrient monitoring, nutrient management, water quality monitoring and development control.

### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

## NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The soil testing that the City does at sports fields is to a high standard, however, it does not complete leaf tissue analysis and moisture testing of these fertilised areas. No soil or moisture testing or leaf tissue analysis is completed at irrigated parks or in dry grass areas, despite the City stating that they fertilise passive turf areas. It is recommended that the City undertake soil testing and leaf tissue analysis at all areas that are fertilised and moisture testing at those areas that are also irrigated.

## FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. It is recommended that the City use soil testing and leaf tissue analysis to determine fertiliser rates of passive turf areas and if irrigation occurs they also conduct moisture testing. If dry grass areas are fertilised then soil tests and leaf tissue analysis should be undertaken.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	NO	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City have structural measures in place, such as infiltration, conveyance or detention systems, to reduce nutrients entering wetlands and the ocean. It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	NO	UNSATISFACTORY
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

It is highly recommended that the City monitor wetlands, stormwater drains and compensating basins for nutrient levels and report the results to their local community. It is noted that the City has had an action in their Sustainable Water Management Plan since 2013 to 'Carry out a stormwater quality monitoring program to assist with prioritising and designing stormwater refits', but according to the responses received in this and previous years surveys none has been implemented. It is recommended that any monitoring program implemented be ongoing to identify issues as they arise. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	UNSURE	

The respondent to the survey was unsure if the City had any mechanisms in place to regulate sediment management. It is important that if they do not have mechanisms in place to regulate sediment management they enact some in the future (refer to main report for measures that can be implemented).

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Melville Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **73% ABOVE AVERAGE**

The City of Melville has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications, nutrient management, water quality monitoring and development control.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, moisture testing and leaf tissue analysis at sports fields, golf courses and irrigated parks and it is recommended that this practice continue. It does not conduct any testing or analysis of foreshore and dry grass areas, despite indicating that foreshore areas are fertilised. It is recommended that before applying fertiliser to any area, but particularly foreshore areas, the City conduct soil tests and leaf tissue analysis and if they irrigate the area, moisture testing as well.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. Analysis of the fertiliser applied to active and passive turf indicates that single application rates of nitrogen are above the 40kg/ha that is recommended. It is recommended that the City ensure that each single application of nitrogen be below this amount.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping enacted.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	BELOW AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

The City monitors nutrient levels in wetlands and reports the results to the local community. It is recommended that the City implement a monitoring program for stormwater drains and compensating basins and report the results to the local community. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City impose conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Nedlands Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **91% EXCELLING**

The City of Nedlands has excelled in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient monitoring and fertiliser applications.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	ABOVE AVERAGE
Is analysis conducted by a lab affiliated with ASPAC?	NO RESPONSE	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing on sports grounds and foreshore areas and soil and moisture tests on irrigated parks. It is recommended that leaf tissue analysis is undertaken at irrigated parks to determine if fertiliser is required and that if dry grass areas are fertilised they be subject to soil tests and leaf tissue analysis. It is recommended that, if not already, a laboratory affiliated with ASPAC be used for analysis.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. Analysis of the fertiliser applied to active and passive turf indicates that single application rates of nitrogen are above the 40kg/ha that is recommended. It is recommended that the City ensure that each single application of nitrogen be below this amount.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City continue to implement its current practices. It is recommended that no further deciduous trees be planted on road verges or near waterbodies.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	N/A	
Are stormwater drains regularly monitored for nutrient levels?	N/A	
Are compensating basins regularly monitored for nutrient levels?	N/A	

The City has reported that it has no wetlands or compensation basins within its borders or under its control and its stormwater is directed to "dry" sumps or soakwells (those that do not intersect the maximum groundwater table).

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

## ADDITIONAL INFORMATION PROVIDED

Whilst custom blend turf fertilisers are produced to target specific soil deficiencies in Nedlands, only 0% phosphorous fertilisers are applied to turf on sports playing fields along the river foreshore area .

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 Shire of Peppermint Grove Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **38% BELOW AVERAGE**

The Shire of Peppermint Grove has been below average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient monitoring, fertiliser applications, nutrient management, water quality monitoring and development control. It is recommended that future respondents to this survey seek assistance from other departments in the Shire if they are unsure of the answers to a question as not providing a response can negatively affect the overall result.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	NO	UNSATISFACTORY
Is analysis conducted by a lab affiliated with ASPAC?	N/A	
Is plant available phosphorus in the soil measured using an appropriate test?	N/A	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	N/A	

It is recommended that the Shire conduct regular soil tests and leaf tissue analysis in all fertilised areas at least biannually to determine accurate nutrient levels. In irrigated areas they should also conduct soil moisture tests. It is recommended employees involved in turf management attend SERCULs Fertilise Wise Fertiliser Training in 2022.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	NO	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be performed. It was reported that fertiliser is only applied to passive parks and foreshore areas and the same fertiliser is used in both areas. It is recommended that the fertiliser used be determined by soil tests, leaf tissue analysis and, if irrigated, moisture tests. No fertiliser should be applied in summer.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	NO	UNSATISFACTORY
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	NO	
Are there deciduous trees in parks and streetscapes?	NO	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	N/A	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	NO	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the Shire put in place structural measures and non-structural measures to reduce nutrients from grass clippings and sediment entering the Swan River via stormwater drains (refer to main report for measures that can be implemented) and implement a NIMP for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	N/A	UNSATISFACTORY
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	N/A	

The Shire has no wetlands or compensation basins within its borders or under its control. It is recommended that the Shire implement a water quality monitoring program for its stormwater drains and report the results to the local community. SERCUL Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	NO RESPONSE	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO RESPONSE	
Do you have mechanisms in place to regulate sediment management?	YES	

The respondent to the survey indicated that they were unsure if the Shire had mechanisms in place to regulate sediment management. A quick search of the internet showed that the Shire have 'Sand Drift Prevention and Sediment Control Guidelines' for building sites which is a regulatory mechanism so the response was changed accordingly. It is recommended that if they are not already, the Shire imposes conditions on developments including NIMPs, monitors these for compliance and prosecutes developers that are not complying. It is also recommended that future respondents to this survey seek assistance from other departments in the Shire if they are unsure of the answers to a question as not providing a response can negatively affect the overall result.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Perth Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **81% EXCELLING**

The City of Perth has excelled in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management and development control.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing at sports fields, irrigated parks and foreshore areas and it is recommended that this practice continues. If fertiliser is applied in dry grass areas it is recommended that soil tests and leaf tissue analysis is performed in these areas as well.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. It is understood that the City is unique in that it needs to maintain foreshore areas to a high standard due to public expectations. The buffer zone recommendations are based on the WA Environmental Guidelines for the Establishment and Maintenance of Turf Grass Areas (2014) and are the recommended Best Management Practices for preventing environmental issues rather than a guide on how to grow turf to a high standard.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping be enacted.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	N/A	
Are compensating basins regularly monitored for nutrient levels?	N/A	

The City regularly monitors wetlands for nutrient levels and reports the results to their local community and it is recommended that this practice continues. The City reports that all of its stormwater is directed to "dry" sumps or soakwells (those that do not intersect the maximum groundwater table) and that it doesn't have any compensation basins within its borders or under its control.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments within their control, monitors these for compliance and prosecutes developers that are not complying. It is recognised that the City is often not the approving authority for large-scale developments in the city (more often being the State Government).

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

## ADDITIONAL INFORMATION PROVIDED

City of Perth is unlike a metropolitan local government in regards to expansion, land development (housing estates, clearing, sediment, agriculture).



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Rockingham Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **63% ABOVE AVERAGE**

The City of Rockingham has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management, water quality monitoring, development control and nutrient education.

#### RESPONSE KEY:

BMP has been achieved  
  BMP has NOT been achieved  
  Not Applicable  
  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  
  Above Average  
  Average  
  Below Average  
  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in waterbodies?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests and leaf tissue analysis for sports fields, irrigated parks, and foreshore areas. It is recommended that this practice continues and if these areas are irrigated that moisture testing also be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken.

The same fertiliser was used on active, passive and foreshore areas at the same rates of application. The fertiliser choice and rate of application should be based on the results of testing and analysis and the conditions and uses of the site. Fertiliser should not be applied in summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering rivers and wetlands?	UNSURE	BELOW AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	NO	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that the City have structural measures in place, such as infiltration, conveyance or detention systems, to reduce nutrients entering waterbodies. Non-structural measures should also be put in place to prevent nutrients from sediment entering waterbodies via stormwater drains (refer to main report for measures that can be implemented). Streetsweeping, for example, can be utilised for sediment removal in much the same way as it is used for grass clippings and deciduous leaves. It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy should be developed to use local native plants as the first choice in landscaping.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	NO	ABOVE AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	YES	

The City monitors stormwater drains and compensating basins that are under their control for nutrient levels, however, did not report on whether they report these results to the local community. It is recommended that the City regularly monitor wetlands, stormwater drains and compensating basins for nutrients and report the results to the local community. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	NO	

The City reported having no mechanisms in place to regulate sediment management. It is recommended that the City have mechanisms in place to regulate sediment management, monitors these for compliance and prosecutes developers that are not complying (refer to main report for measures that can be implemented).

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCULs website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of South Perth Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turf areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



## BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **76% ABOVE AVERAGE**

The City of South Perth has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management, water quality monitoring, development control and nutrient education.

### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

## NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing of its sports fields, golf courses and foreshore areas. It conducts soil tests and leaf tissue analysis of irrigated parks but no testing or analysis of dry grass areas. It is recommended that the City conduct moisture testing of irrigated parks and if it fertilises dry grass areas it conducts soil and leaf tissue analysis of these areas.

## FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	NO	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. Analysis of the amounts of fertiliser applied to active turf indicates that Baileys Sure Green Gold is applied at a rate above the recommended single application rate of 40kg/ha of nitrogen. Some fertiliser is also being applied in summer. It is recommended that the City ensure that each single application of nitrogen be below the recommended amount and that they do not fertilise in summer.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies and that the City implement a NIMP for streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	ABOVE AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	NO	

The City regularly monitors wetlands and stormwater drains for nutrient levels and reports the results to the local community. It is recommended that the City monitor compensating basins for nutrient levels and report the results to the local community. SERCUL's Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCUL's website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Stirling Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turf areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **86% EXCELLING**

The City of Stirling has excelled in implementing Best Management Practices in 2020/21. Further improvements can be made in the area of fertiliser applications, nutrient management and water quality monitoring.

#### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing of sports fields, golf courses, irrigated parks and foreshore areas and it is recommended that this practice continue. If dry grass areas are fertilised it is recommended that soil tests and leaf tissue analysis be conducted.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	BELOW AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	YES	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. Analysis of the amounts of fertiliser applied to active turf indicates that some fertilisers are being applied at a rate above the recommended single application rate of 40kg/ha of nitrogen. Fertiliser is also being applied in winter on active areas and summer on foreshore areas. It is recommended that the City ensure that each single application of nitrogen be below the recommended amount and that they do not fertilise in winter or summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies and that the City implement a policy to use local native plants as the first choice when landscaping.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	ABOVE AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	YES	

The City regularly monitors its wetlands and compensation basins for nutrient levels, but does not report the results to the local community. It is recommended that the City monitor wetlands, stormwater drains and compensating basins for nutrient levels and report the results to their local community.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 City of Swan Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

100%  
BMPs

Overall BMP: **100% EXCELLING**

The City of Swan should be commended for having all the assessed nutrient Best Management Practices in place. Further improvement could be made in the areas of nutrient monitoring and fertiliser applications.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing of sports fields and soil tests of irrigated parks. It is recommended that it also conduct leaf tissue analysis and moisture testing of irrigated parks. If fertiliser is applied to dry grass areas then soil tests and leaf tissue analysis should be conducted in these areas.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. The City applies fertiliser containing nitrogen at levels above the recommended single application rate of 40kg/ha to active and passive areas and applies some of it year round. It is recommended that the City not exceed the recommended single application rate of nitrogen and only applies fertiliser in autumn and spring.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	YES	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City continue to implement its current practices. It is recommended that no further deciduous trees be planted on road verges or near waterbodies.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	EXCELLING
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	YES	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City continue to implement their current practices, including the reporting of results to the community.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	EXCELLING
Are stormwater drains regularly monitored for nutrient levels?	YES	
Are compensating basins regularly monitored for nutrient levels?	YES	

It is recommended that the City continue to implement their current practices, including monitoring developments for compliance. If developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.

## ADDITIONAL INFORMATION PROVIDED

The City of Swan has used biological water treatment products like Biostim to treat algal blooms in lakes and compensation basins in a manner that is safe to fish and other aquatic organisms. These products stimulate beneficial bacteria through the provision of trace elements that allow the bacteria to outcompete harmful or odour-causing micro-organisms, including cyanobacteria or blue-green algae, in consuming nutrients in the water. Therefore nitrogen and phosphorus levels in the water column are reduced and prevented from embedding in the sediments.

The City also harvested the biomass of sedges and rushes growing on floating islands at Emu Lake to stimulate the take-up of nutrients from the water by the plants. The City also revegetates the shore of lakes and basins to reduce water-borne nutrients in various catchments and sub-catchments.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 2021 Town of Victoria Park Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **68% ABOVE AVERAGE**

The Town of Victoria Park has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management, water quality monitoring and development control.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The Town conducts soil tests, leaf tissue analysis and moisture testing of sports fields, irrigated parks, and foreshore areas. It is recommended that the City continues to implement this practice.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. It is recommended that the Town continue to implement their current practices in other turfed areas, with the exception that fertiliser not be applied during the summer months.



## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	NO	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should be implemented for streetscapes and a policy to use local native plants as the first choice in landscaping be enacted.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	BELOW AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

The Town regularly monitors wetlands for nutrient levels but does not report the results to their local community. It is recommended that the Town monitor wetlands, stormwater drains and compensating basins for nutrient levels and report the results to their local community. SERCULs Water Quality Monitoring team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	NO	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the Town include provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development, including NIMPs. Developments should be monitored for compliance and if developers are found not to be in compliance they should be prosecuted.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the Town continue to implement their current practices.

# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Vincent Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



### BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **55% AVERAGE**

The City of Vincent has been average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of nutrient monitoring, nutrient management, water quality monitoring and development control.

#### RESPONSE KEY:

BMP has been achieved  BMP has NOT been achieved  Not Applicable  Response not assessed

#### BEST MANAGEMENT PRACTICE (BMP) KEY:

Excelling  Above Average  Average  Below Average  Unsatisfactory

### NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	AVERAGE
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	NO	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	NO	

The City only conducts leaf tissue analysis of its sports fields. No other testing is undertaken. It is recommended that the City undertakes soil testing and leaf tissue analysis of all turf areas that are fertilised and moisture testing of irrigated areas. Plant available phosphorus in the soil should be measured using an appropriate test and rates of phosphorus determined by soil testing and PRI results.

### FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	EXCELLING
Is fertiliser added to foreshore reserves and parks?	NO	
Does the fertiliser contain phosphorus?	N/A	
Is it a controlled release, low water soluble fertiliser?	N/A	

The City does not apply fertiliser to foreshore areas and it is recommended that this practice continue. Analysis of the amounts of fertiliser applied to active turf indicates that some fertilisers are being applied at a rate above the recommended single application rate of 40kg/ha of nitrogen. Some fertiliser is also being applied in winter on active areas and summer on passive areas. It is recommended that the City ensure that each single application of nitrogen be at or below the recommended amount and that they do not fertilise in winter or summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering rivers and wetlands?	NO	ABOVE AVERAGE
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that the City have structural measures in place, such as infiltration, conveyance or detention systems, to reduce nutrients entering waterbodies. It is recommended that no further deciduous trees be planted on road verges or near waterbodies. A NIMP should also be implemented for streetscapes. It is noted that the City has an Irrigation Plan for streetscapes but not a Nutrient Plan.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	NO	UNSATISFACTORY
Are stormwater drains regularly monitored for nutrient levels?	NO	
Are compensating basins regularly monitored for nutrient levels?	NO	

It is highly recommended that the City monitor wetlands, stormwater drains and compensating basins for nutrient levels and report the results to their local community. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	BELOW AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	NO	

It is recommended that the City impose conditions on development which include NIMPs and have mechanisms in place to regulate sediment management (refer to main report for measures that can be implemented). Developments should be monitored for compliance and if developers are found not to be in compliance they should be prosecuted. It is noted that developers are required to supply Irrigation Plans but not Nutrient Plans.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	EXCELLING
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	YES	

It is recommended that the City continue to implement their current practices.



# ANNUAL NUTRIENT SURVEY for Local Government Authorities

## 20 21 City of Wanneroo Nutrient Management Score Card

The Swan and Canning River systems, and many wetlands, are suffering from regular, and sometimes toxic, algal blooms. These blooms occur due to excessive inputs of nutrients, particularly phosphorus and nitrogen, combined with low water flows and warm temperatures. Local authorities are responsible for nutrient use and management on turfed areas and in reserves, in drainage systems and in local planning decisions and thus have the opportunity to lead the community by setting examples in best practice.

Each year Local Government Authorities (LGAs) in Perth are surveyed on their nutrient practices by the Phosphorus Awareness Project of the South East Regional Centre for Urban Landcare (SERCUL). The survey is broken up into different sections including nutrient monitoring, fertiliser applications, nutrient management, nutrient education, water quality monitoring and development control. The results from the questions asked in the survey have been used to provide a Score Card for each LGA that responded and clearly show how the LGA is performing and where and how improvements can be made. LGAs should also refer to the Annual Nutrient Survey for Local Government Authorities Results 2021 report ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)) for further recommendations on how to implement nutrient Best Management Practices (BMPs).

Please note that not all of the questions asked in the survey were used to determine the overall best management practice score. Any additional information about nutrient practices provided by an LGA is summarised at the end of this scorecard.



## BEST MANAGEMENT PRACTICE SCORE 2021

Overall BMP: **76% ABOVE AVERAGE**

The City of Wanneroo has been above average in implementing Best Management Practices in 2020/21. Further improvements can be made in the areas of fertiliser applications, nutrient management, water quality monitoring, development control and nutrient education.

### RESPONSE KEY:

■ BMP has been achieved ■ BMP has NOT been achieved ■ Not Applicable  Response not assessed

### BEST MANAGEMENT PRACTICE (BMP) KEY:

■ Excelling ■ Above Average ■ Average ■ Below Average ■ Unsatisfactory

## NUTRIENT MONITORING

QUESTION	RESPONSE	SECTION BMP
Are regular soil tests &/or leaf tissue analyses conducted in grassed and turf areas?	YES	EXCELLING
Is analysis conducted by a lab affiliated with ASPAC?	YES	
Is plant available phosphorus in the soil measured using an appropriate test?	YES	
Are rates of phosphorus determined by soil testing and Phosphorus Retention Index (PRI) results?	YES	

The City conducts soil tests, leaf tissue analysis and moisture testing at sports fields, golf courses, and foreshore areas. It does soil testing and leaf tissue analysis at irrigated parks, but does not test moisture levels and does no testing or analysis of dry grass areas. It is recommended that the City test soil moisture levels at irrigated parks and if it fertilises dry grass areas that soil tests and leaf tissue analysis be undertaken.

## FERTILISER APPLICATIONS

QUESTION	RESPONSE	SECTION BMP
Are there foreshore reserves and parks in the LGA?	YES	AVERAGE
Is fertiliser added to foreshore reserves and parks?	YES	
Does the fertiliser contain phosphorus?	NO	
Is it a controlled release, low water soluble fertiliser?	YES	

A buffer zone immediately adjacent to waterbodies should be established in which no fertilising takes place. The width of the buffer zone should be determined by factors such as the site condition and function, however, if possible, it should be at least 50m. Outside the buffer zone, if fertiliser is to be applied it should be a controlled release, phosphorus free, low water soluble fertiliser that is applied according to soil testing and leaf tissue analysis. If the area is irrigated moisture testing should also be undertaken. Analysis of the amounts of fertiliser applied to active turf indicates that the Umaxx Stabilised Nitrogen fertiliser is being applied at a rate above the recommended single application rate of 40kg/ha of nitrogen. Fertiliser is also being applied during winter and summer on active, passive and foreshore areas. It is recommended that the City ensure that each single application of nitrogen be below the recommended amount and that they do not fertilise in winter or summer.

## NUTRIENT MANAGEMENT

QUESTION	RESPONSE	SECTION BMP
Are structural BMPs in place to reduce nutrients entering waterbodies?	YES	EXCELLING
Are non-structural measures in place to prevent nutrients from grass clippings entering waterbodies via stormwater drains?	YES	
Are there deciduous trees in parks and streetscapes?	YES	
Are non-structural measures in place to prevent nutrients from deciduous leaves entering waterbodies via stormwater drains?	YES	
Are there non-structural measures in place to prevent nutrients from sediment entering waterbodies via stormwater drains?	YES	
Is a Nutrient and Irrigation Management Plan (NIMP) implemented for streetscapes?	NO	
Is there a policy to use local native plants as the first choice in public (LGA) and private (developers) landscaping?	YES	

It is recommended that no further deciduous trees be planted on road verges or near waterbodies and that the City implement a NIMP for its streetscapes.

## WATER QUALITY MONITORING

QUESTION	RESPONSE	SECTION BMP
Are wetlands regularly monitored for nutrient levels?	YES	AVERAGE
Are stormwater drains regularly monitored for nutrient levels?	N/A	
Are compensating basins regularly monitored for nutrient levels?	NO	

The City regularly monitors wetlands for nutrient levels however does not report these results to the local community. The City reports that all of its stormwater is directed to "dry" sumps or soakwells (those that do not intersect the maximum groundwater table). It is recommended that the City regularly monitor wetlands and compensation basins for nutrient levels and report the results to the local community. SERCULs Water Quality Monitoring Team can assist LGAs with undertaking this work and can be contacted on 9458 5664.

## DEVELOPMENT CONTROL

QUESTION	RESPONSE	SECTION BMP
Are there provisions in the Town Planning Scheme or Planning Policies to enforce environmental conditions on development?	YES	ABOVE AVERAGE
Do you impose conditions on development which include Nutrient and Irrigation Management Plans (NIMPs)?	NO	
Do you have mechanisms in place to regulate sediment management?	YES	

It is recommended that the City imposes conditions requiring NIMPs on developments, monitors these for compliance and prosecutes developers that are not complying.

## NUTRIENT EDUCATION

QUESTION	RESPONSE	SECTION BMP
Are dog poo bins and bags provided in parks and foreshore reserves?	YES	ABOVE AVERAGE
Are measures taken to educate the public about not feeding bread to waterbirds in foreshore reserves and parks?	YES	
Are ratepayers provided with advice on best practice in fertiliser management according to soil type?	NO	

It is recommended that the City provide ratepayers with advice on best practice in fertiliser management according to soil type. SERCUL has a Fertilise Wise brochure that can be sourced for free from SERCUL and distributed to ratepayers at LGA locations. The City can also link its website to the Fertilise Wise page of SERCULs website ([www.sercul.org.au/fertilisewise](http://www.sercul.org.au/fertilisewise)).